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OSBECK'S DAGBOK ÖFWER EN OSTINDSK RESA

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Pehr Osbeck, according to Pritzel, was born at Oset, Sweden, May 9, 1723, and died at Hasslof, Sweden, December 23, 1805. He had attended the University of Upsala, where he had received instruction in natural history from Linnaeus. His rather important contribution to our knowledge of the Chinese flora has quite consistently been overlooked by most botanists. We find few references to species described by Osbeck, while a number of the forms he named and described are not listed in Index Kewensis. His name is perpetuated, however, by the genus *Osbeckia*, named in his honor by Linnaeus, while the Linnaean herbarium contains about 600 specimens of plants, from China, Java, and Spain, collected by him.¹ A number of species included by Linnaeus in the first edition of his Species Plantarum are based on Osbeck's specimens, while others are included in later works of this author. Usually the names given by Linnaeus are the same as those used by Osbeck, although rarely is Osbeck cited as the author of a species, while a number of plants characterized and named by him were ignored by Linnaeus.

In his "Dagbok" Osbeck mentions nearly 500 species of plants, of which about 80 are accompanied by descriptions in Latin. Twenty-six species and two genera are named and described for the first time, but few of them are included in any subsequent botanical work. About twenty *nomina nuda* also appear in the book.

Osbeck left Sweden November 18, 1750, as chaplain of the "Prince Charles," one of the ships belonging to the Swedish East India Company, bound for Canton, China, and returned June 26, 1752. En route he gave much attention to the study of natural history, and described not only plants, but also birds, mammals, reptiles, fishes, and insects. His contributions to botany apply mainly to the floras of Spain, Java, and southern China, mostly to the latter; his stop in Java was brief. He remained with his ship in the vicinity of Whampoa and Canton, China, from August 23, 1751 to January 4, 1752.

¹ Jackson, B. D. Index to the Linnaean Herbarium 16, 1912.

The full title of Osbeck's work is as follows: "Dagbok | Öfwer | en | Ostindsk | Resa | Åren 1750. 1751. 1752. | Med Anmärkningar | Ut i | Naturkunnigheten, främ- | mande Folkslags Språk, Seder, | Hushållning, m.m. | På Fleras åstundan | Utgifwen | Af | Pehr Osbeck. | Kongl. Sw. Wettenskaps Societetens Ledamot. | Jämte 12 Tabeller | Och Afledne Skepps-Predikanten Toréns Bref. | Stockholm | — | 1757." The text is in Swedish, but where plants and animals are described the descriptions are usually in Latin. The book consists of a short introduction, three hundred and seventy-six pages of text, an index, and twelve plates. A copy of this rare work is in the library of the Arnold Arboretum, and a photographic reproduction of it is in the library of the United States Department of Agriculture.

In the year 1765 a German translation was published by J. G. Georgi under the title: "Herrn Peter Osbeck | Pastors zu Hasslöv und Woxtorp, der Königl. Schwedischen | Akademie zu Stockholm und der Kön. Gesellschaft zu Upsala, | Mitgliedes | Reise | nach Ostindien und China. | Nebst O. Torens Reise nach Suratte | und C. G. Ekebergs Nachricht von der Landwirthschaft | der Chineser. | Aus dem Schwedischen Übersetz | von | J. G. Georgi | Mit 13 Kupfertafeln." This consists of an introduction of twenty-four pages, 552 pages of text, index, and thirteen plates. The descriptions of plants and animals, in Latin in the original edition, are here translated into German.

In the year 1771 J. R. Forster translated the German edition into English, under the following title: "A | Voyage | to | China and the East Indies, | By Peter Osbeck, | Rector of Hasloef and Woxtorp, | Member of the Academy of Stockholm, and of the | Society of Upsal. | Together with a Voyage to Suratte, | By Olof Toreen, | Chaplain of the Gothic Lion East Indiaman. | and | An Account of the Chinese Husbandry, | By Captain Charles Augustus Ekeberg. | Translated from the German, By John Reinhold Forster, F. A. S. | To which are added, A Faunula and Flora Sinensis." This was issued in two volumes. 1 (1771) V+I-396, *pl.* 1-13; 2 (1771) 1-367, index. This edition is very rarely cited in botanical literature as Osbeck's "Iter ed Angl." It is of special interest because it contains the first attempt to enumerate, in systematic order, the species of the Chinese flora after the establishment of the binomial system of nomenclature. Pages 339 to 367 are devoted to this enumeration, apparently the work of the translator, under the title "Flora Sinensis: or, An Essay towards a Catalogue of Chinese Plants." About 260 species are listed, compiled

from the writings of Linnaeus and Osbeck. Copies of German and English editions are in the Library of Congress, Washington. Bretschneider² under the heading "Swedish collectors of plants in South-China," 1751 and 1766, pp. 88-119, discusses the work of Osbeck, Toren, Eckeberg, Sparrman, and Lagerstroem in connection with the early botanical exploration of southern China, and enumerates 319 species of plants that were known from this region by Linnaeus. His data regarding Osbeck were taken from Forster's English translation of Osbeck's work.

The species described by Osbeck from Java were collected at or near sea level, at Anjer and New Bay, at the west end of the Island. Those described from China were chiefly from the vicinity of Whampoa with a few from Canton. In many cases the descriptions are quite sufficient to enable one accurately to determine the species Osbeck intended, even when the descriptions are relatively short. Occasionally, however, I have been unable to determine the status of a species. Many are represented by actual specimens in the Linnaean herbarium in London. Wherever it has been possible to determine the status of Osbeck's species, his specific names, when valid, have been adopted even when they displace names of later authors now in common use. In a few cases Osbeck's name must displace that of Linnaeus as the authority for various species, where there is no change in the specific name. A slight amount of field work, or perhaps a more intensive knowledge of the flora of Kwangtung than I possess may enable future investigators more exactly to determine the status of the few remaining doubtful species.

I am in grave doubt as to the propriety of adopting certain specific names from Osbeck, as Swingle has recently proposed.³ In these cases the Latin name appears, but there is, usually, no description in Latin, while the statements in Swedish regarding the fruits or the plants, can hardly be considered as descriptions. The special cases are *Rhamnus thea* Osbeck, *Citrus grandis* Osbeck, *C. sinensis* Osbeck, and perhaps *C. limonia* Osbeck. At any rate it is doubtful if we are warranted in displacing a specific name of a later author on the basis of the meager data given by Osbeck in the case of the above species.

In addition to the valid corrections and additions to Index Kewen-

² Early European Researches into the Flora of China. Journ. North-China Branch Roy. As. Soc. II, 15: 1-194. 1880.

³ Sargent, *Plantae Wilsonianae* 2: 141-151. 1914.

sis, a considerable number of *nomina nuda* occur which in Osbeck's work are here enumerated merely to call attention to the fact that they are *nomina nuda*. None of them occur in Index Kewensis. The list is as follows: *Abies chinensis*, p. 217; *Ammi hispanicum*, p. 57; *Buxoides aculeata*, p. 242; *Calla javanica*, p. 277; *Cacalia incana*, p. 234; *Cucurbita chinensis*, p. 292; *Curcuma chinensis*, p. 205; *Cyperus dichotomus*, p. 229; *Gratiola virginianoides*, p. 205; *Nyctanthes orientalis*, p. 136; *Rhus chinensis*, p. 232; *Saccharum pluviale*, p. 130; *Salicornia fruticosa*, p. 56; *Stachys hirta*, p. 46; *Stachys arvensis*, p. 47; *Tillaea procumbens*, p. 57; *Toxicaria rumphii*, p. 90. Other *nomina nuda* in groups not covered by Index Kewensis are *Lichen chinensis*, *Jungmannia chinensis*, *Hypnum javanense*, and *Lycopodium varium*.

A few slight differences in names, due to typographical errors, are noted, such as *Smilax sassaparilla*, p. 248, instead of *S. sarsaparilla*; *Hypochoeris radiata*, p. 48, instead of *H. radicata*; *Jasminum azoreum*, p. 272, instead of *J. azoricum*; and *Scorpiurus falcata*, p. 73, German edition, instead of *S. sulcata* as it correctly appears in the original edition.

Generic names originated by Osbeck are *Cryptanthus*, *Tetradapa*, and the *nomina nuda* *Buxoides* and *Toxicaria*, none of which have been used by subsequent authors in Osbeck's sense. They are not listed in any subsequent botanical work.

Below are listed the species described by Osbeck that have been overlooked by most botanists. New combinations are made in a few cases. The original descriptions are quoted in full, and, where essential, an English translation of Osbeck's Swedish description or comment is added. At the end is given a summary of the species not listed in Index Kewensis, and those listed, but their places of publication erroneously cited; the *nomina nuda* are mentioned above.

I am indebted to Mr. Ivar Tidestrom of the U. S. Department of Agriculture for direct translation of some of Osbeck's comments and descriptions from the original Swedish, for comparison with the published German and English translations.

Achyranthes chinensis Osbeck, Dagbok Ostind. Resa 205. 1757 = ?
A. aspera L.

This is probably a synonym of *Achyranthes aspera* L., or *A. bidentata* Blume, if placed by Osbeck in the right genus. The description is inadequate, and apparently bracts or bracteoles were interpreted

by the author as sepals. The original description is as follows: "*Achyranthes chinensis*. Obs. Perianthum duplex, corolla longius. Corollam 5 petalum includens; exterius minus, diphyllum, interius 5 phyllum. Flores racemosi, terminatrices. Pedunculi ex alis. Folia lanceolata, opposita, nervosa, glabra. Caulis ruber." This plant was observed September 8, 1751, near Canton, and while the description does not entirely agree with *Achyranthes aspera* or *A. bidentata*, it applies better to these species than to any other amaranthaceous plant known from Kwangtung Province, China.

Agaricus chinensis Osbeck, Dagbok Ostind. Resa 221. 1759.

The description, which is entirely inadequate, is as follows: *Agaricus (chinensis)* stipite albo, spithameo, pileo lutescente." The plant was from the vicinity of Whampoa, September 12, 1751.

Albizzia chinensis (Osbeck) comb. nov.

Mimosa chinensis Osbeck, Dagbok Ostind. Resa 233. 1757.

Mimosa marginata Lam. Encycl. 1: 12. 1783.

Mimosa stipulata Roxb. Hort. Beng. 40. 1814, *nomen*; Fl. Ind. ed. 2, 2: 549. 1832 (*stipulacea*).

Acacia marginata Hamilt. in Wall. Cat. No. 5243. 1832.

Albizzia stipulata Boiv. Encycl. XI X Siècle 2: 33. 1838.

Albizzia marginata Merr. in Philip. Journ. Sci. Bot. 5: 23. 1910.

Osbeck's *Mimosa chinensis* has been overlooked by all botanists, and is not listed in Index Kewensis. The description is good, and applies unmistakably and exclusively to the species generally known as *Albizzia stipulata* Boiv. The original description is here given: "*Mimosa (chinensis)* inermis, stipulis foliolo longe majoribus, semicordatis. Folia septem vel octojuga. Foliola numerosa, fere lanceolata, sed basi obtusiora. Differt imprimis & manifeste a reliquis maximis suis stipulis, quae semicordatae cauli adsident eumque amplectuntur, plusquam decies majores foliolis. Flores non vidi." The type was from near Whampoa, where the plant was observed by Osbeck, October 6, 1751. Among all the Asiatic *Mimosoideae* Osbeck's description applies only to *Albizzia stipulata* Boiv. It grows in southern China, is rather widely distributed in southeastern Asia, and is also found in the Philippine Islands, in Java, probably in other islands of the Malay Archipelago, and in the Andaman and Nicobar Islands.

Briza elegans Osbeck, Dagbok Ostind. Resa 246. 1757=? *Eragrostis elegantula* Steud.

The original description of this species is as follows: "*Briza* (*elegans*?) spiculis oblongis, valvulis carinatis" followed by a statement in Swedish to the effect that it was a very beautiful grass that grew at the highest plantations. It was from Dane's Island, near Whampoa, October 24, 1751.

Rendle⁴ includes this species under *Briza*, but states that he had seen no specimens; he suggests that it might be a synonym of *Eragrostis major* Host. Dunn & Tutcher⁵ also enumerate it, with the comment: "Near Canton. Fl. April to June." In both publications the original place of publication is cited correctly, but the species is not included in Index Kewensis. *Briza* is known from China by but a single species, *Briza minor* L., this apparently introduced, and northern in range (Province of Chihli). No representative of the genus is known from southern China. I am of the opinion that *Briza elegans* Osbeck is probably a synonym of *Eragrostis elegantula* Steud.; at least that it is an *Eragrostis*, certainly not a *Briza*. The specific name in *Eragrostis* is invalidated by *Eragrostis elegans* Nees.

Ceratolobus javanicus (Osbeck) comb. nov.

Caryota javanica Osbeck, Dagbok Ostind. Resa 270. 1757.

Ceratolobus glaucescens Blume in Roem. & Schult. Syst. Veg. 7: 1334. 1829.

This species has been overlooked by all botanists and is not enumerated in Index Kewensis. Osbeck's specimen was from New Bay, Java, where the plants were observed January 19, 1752. The original description is here repeated: "*Caryota* (*javanica*) frondibus bipinnatis, aculeatis; foliolis cuneiformibus, rotundato-praemorsis. Fructificationem non vidi; unde genus obscurum. Frondes sunt bipinnatae, ut in *Caryota*, subtus albidæ. Pinnae alternæ, obovatae, plicatae, margine superiori rotundato inaequalis. Petioli superne aculeis plurimis oppositis, recurvatis, non solum ad pinnarum exortum, sed etjam saepe par enum vel 2 inter pinnae." The description is introduced by a statement in Swedish, of which the following is a translation: "A great number of palms 6 to 12 feet high, with curved thorns on the leaves, held us fast and would not let go until our

⁴ Journ. Linn. Soc. Bot. 36: 421. 1904.

⁵ Fl. Kwangtung and Hongkong 329. 1912.

clothes were almost torn asunder, as well as the skin on the hands and the face." This description applies unmistakably to a group of palms, the rattans, characteristic of the Indo-Malayan region, the "prehensile" characters of which are well known to all who have traveled in the forests of the Malay Archipelago. Among all the Javan species, however, Osbeck's description applies best to *Ceratolobus glaucescens* Blume, the only other possible species being *Korthalsia robusta* Blume. However, Osbeck's specimen was from near sea level in western Java, which practically excludes the *Korthalsia* from consideration in this connection. Koorders⁶ gives the distribution of *Ceratolobus* as "West Java: In den unteren Gebirgsgegenden von den Residenzschaf-ten Bantam, Batavia, und Preanger . . .," while, according to the same author, the occurrence of *Korthalsia robusta* Blume in western Java is doubtful.

It is to be noted that Osbeck describes the leaves of *Caryota javanica* as *bipinnate*, which is not true of any of the Malayan palms that are supplied with hooked spines. The term *bipinnate* was apparently used to make the description of *Caryota javanica* agree with the generic description of *Caryota*, through faulty observation, or possibly because the exact significance of the term was not understood by the author. It is apparent, however, that Osbeck prepared no botanical material of this species, and that he probably wrote up his diagnosis, at least in part, from memory.

Catesbaea ? javanica Osbeck, Dagbok Ostind. Resa 92. 1757 = *Clerodendron commersonii* (Poir.) Spreng. (*C. inerme* Auct., haud Gaertn.)

Osbeck's species is not listed in Index Kewensis, and his specific name, although much older than *Volkameria commersonii* Poir. (1808), is invalidated in *Clerodendron* by *C. javanicum* Spreng. The species is the common coastal form that has been called by most botanists *Clerodendron inerme* (L.) Gaertn., but which Clarke⁷ and Gamble⁸ have retained as a distinct species under the name *Clerodendron neriifolium* Wall. (1829). Osbeck's type was from near Anjer, Java, observed by him July 16, 1751, associated with *Acanthus ilicifolius* L., *Convolvulus pes-caprae* L., *Ischaemum muticum* L., *Vitex trifolia* L., and other typical strand plants. The original de-

⁶ Exkursionsflora von Java 1: 226. 1911.

⁷ Hook, f. Fl. Brit. Ind. 4: 589. 1885.

⁸ Journ. As. Soc. Bengal 74²: 827. 1909.

scription is as follows: "*Catesbaea* ? *javanica*. Descr. Calyx: Perianthium infundibuliforme, brevissimum. Corollae tubus longissimus, subcylindraceus: Limbus brevis, quinquepartitus. Filamenta 4 filiformia, longissima, corollae tubo inserta. Antherae parvae. Germen rotundum parvum. Stylus filiformis, staminibus longior. Flores caerulei ex alis; pedunculi ad summum triflori; pedicelli breves. Frutex Rami penduli quadrangulares. Folia ovato-lanceolata opposita glabra acuta petiolata secunda decidua. Habitat ad mare." This description agrees closely with *Clerodendron commersonii*, and there is, moreover, no other known Javan coastal plant to which it at all applies.

Citrus grandis Osbeck, Dagbok Ostind. Resa 98. 1757.

This is scarcely more than a *nomen nudum*, yet there is no doubt whatever as to the identity of the species intended. Swingle⁹ has adopted Osbeck's name in place of *Citrus decomana* L. There is no Latin description, and no reference to *Citrus aurantium* L. var. *grandis* L. Sp. Pl. 783. 1753. Under the heading "Pompelmoser" Osbeck describes two forms or species, the first the common pomelo as *Citrus grandis*, the second the form that the Javanese called *pompelmus*. The following is a translation of Osbeck's statement: "Pompelmoser, *Citrus grandis* is a large round fruit resembling an orange but much larger, and on account of its acidity more refreshing than the orange, in the place of which it is eaten after meals. The rind is spongy, as thick as one's finger and bitter as in the *pomeranser* (the bitter or Seville orange), to which this fruit is nearest related. There was another kind which the Javanese called *pompelmus*, a round fruit like a small orange but green and covered with green warts. Of this I saw but two. It was more expensive, sweeter and better flavored than the preceding."

Under the latter Osbeck gives, with doubt, a footnote reference to "Limon tuberosus martinicus, malice Lemon martin. Rumph. 2. p. 101. t. 26?" The oldest binomial for the pomelo is *Aurantium maximum* Burm. Index Universalis Herb. Amb. 16. 1755.

Citrus limonia Osbeck, Reise Ostind. China 250. 1765.

Swingle¹⁰ has adopted Osbeck's name for the form generally known as *Citrus limonum* Risso or *C. medica* var. *limonum* Hook. f., the

⁹ Sargent, *Plantae Wilsonianae* 2: 144. 1914.

¹⁰ Sargent, *Plantae Wilsonianae* 2: 146. 1914.

common lemon. As noted by Swingle the specific name does not appear in the original (1757) Swedish edition of Osbeck's work, but does in the German (1765) edition. The original description, in Latin, appears as a footnote from the Chinese name *Lam-tjes* on page 192 or Osbeck's Dagbok, and is as follows: "Caulis teres, subscaber, cinereus, pallide striatus. Rami inordinati, patentes, reflexi, rarius spinosi. Ramuli spinis rectis, acutissimis, alternis vel ex alis ramulorum. Folia alterna, oblongo-lanceolata, petiolata, subcrenata. Petioli subalati, lineares." There is a discussion in Swedish to the effect that the Chinese make punch from the unripe fruits that they sell to the sailors, and that the plants are grown in pots for sale.

Citrus sinensis Osbeck, Dagbok Ostind. Resa 41. 1757, *nomen*; Reise Ostind. China 250. 1765.

Swingle¹¹ has adopted Osbeck's name for the sweet orange which he considers to be specifically distinct from the sour orange (*Citrus aurantium* L.). There is no description in the original Swedish edition of Osbeck's work, and in the German edition (1765) is given a very inadequate description which includes also the mandarin orange (*Citrus nobilis* Lour.).

Clematis chinensis Osbeck, Dagbok Ostind. Resa 205, 242. 1757.

Osbeck's species should not be confused with *Clematis chinensis* Retz., which is apparently an entirely different form. It is probable that *Clematis meyeniana* Walp. is a synonym of *Clematis chinensis* Osbeck. The original description, on page 205, is as follows: "*Clematis chinensis*. Obs. Plurima habet cum Clematide Vitalba, at folia lanceolata, angustissima, & flores minores," while on page 242, the following additional data are given: "Obs. pistilla 3 ad 6, stylis plumosis in orbem positus, reflexis. Stam. O obseruavi. Frutex scandens, ramosissimus." In Index Kewensis the species is included, but the place of publication is given as the 1771 English edition "*Clematis chinensis* Osbeck Iter. ed. Angl. 1, 392"; here it is erroneously reduced to the European *Clematis recta* L. Osbeck observed the species in the neighborhood of Canton September 8, and again near Whampoa, October 20, 1751. Nine species of the genus are known from Kwangtung Province, but considering the characters given by Osbeck, and the distribution of the various species, the probabilities are very great that *Clematis meyeniana* Walp. is the species intended by Osbeck.

¹¹ Sargent, *Plantae Wilsonianae* 2: 148. 1914.

Commelina chinensis Osbeck, Dagbok Ostind. Resa 242. 1757 =
Commelina nudiflora L.

There is little doubt as to the correctness of this reduction. The original description is as follows: "*Commelina chinensis*. Chinensibus Ka-tjaa. Corolla aequalis; Caulis nodosus. Folia lineari-lanceolata, alterna, vaginantia, villosa, an *Commelina nudiflora*?" The description of the leaves, as to shape, applies sufficiently well to the Linnaean species, but they are scarcely villous, although sometimes sparingly pubescent. The specimen was collected at Dane's Island, near Whampoa, October 20, 1751. The species is not listed in Index Kewensis.

Convallaria chinensis Osbeck, Dagbok Ostind. Resa 220. 1757 =
? *Scilla chinensis* Benth.

This is probably the same as *Scilla chinensis* Benth. Fl. Hongk. 373. 1861, but Bentham's specific name was not based on Osbeck's. The original description, which is entirely inadequate, is as follows: "*Convallaria (chinensis)* foliis linearibus, corollis sexpartitis. Obs. Est. quasi inter Scillas & Convallarias." The specimens were from 'Frans' (= French) Island, near Whampoa, September 13, 1751.

Cryptanthus chinensis Osbeck, Dagbok Ostind. Resa 215. 1757 = ?

The Latin description of this new genus and species consists of four words only in the form of a footnote: "Foliis oppositis, Rubi facie." A short description is given in Swedish, of which the following is a translation: "In the direction of the city there grew a kind of small bush, about as high as gooseberry bushes, with double white flowers. The leaves are as large as those of the rose mallow, cordate, blunt-serrate, the margins with unequal lobes, pubescent on the upper surface, smooth beneath and with at least eight primary nerves, the flowers in terminal racemes."

The description alone is insufficient to identify this plant. The genus, which has escaped the attention of all botanists, is entirely different from *Cryptanthus* Otto & Dietr. (1836), *Cryptanthus* Nutt. (1849), and *Cryptantha* Lehm. (1836). The plant was from Dane's Island, near Whampoa, September 11, 1751.

Desmodium styracifolium (Osbeck) comb. nov.

Hedysarum styracifolium Osbeck, Dagbok Ostind. Resa 247. 1757;
L. Syst. Veg. ed. 10. 1169. 1759.

This species has been reduced to *Desmodium retroflexum* (L.) DC., but *Hedysarum styracifolium* Osbeck is an older name than *H. retroflexum* L., on which DeCandolle's species is based. The type was from Dane's Island, near Whampoa, October 25, 1751, and the original description is as follows: "*Hedysarum (styracifolium)* foliis simplicibus cordato-orbiculatis, retusis, supra glabris."

Fucus maximus Osbeck, Dagbok Ostind. Resa 283. 1757 = *Ecklonia buccinalis* (L.) Hornem.

This was from latitude 33° 13' S. in the vicinity of Cape Colony, March 10. The original description, presented as a footnote under "Trumpet-grass," is as follows: "*Fucus* (maximus) caule tereti, fistuloso, simplici, flabello quasi terminato. An *Fucus pavonicus* ? cfr. Trombas. G.M.A.V.V.L. Descriptio itin. navalis in ind. p. 51. fig. mala. Obs. Folia terminalia, adgregata, distica, inferiora gradatim minora. Caulis defoliatis." Osbeck's specific name antedates the Linnean *Fucus buccinalis* on which *Ecklonia buccinalis* is based, but no change is here made.

Limnophila chinensis (Osbeck) comb. nov.

Columnea ? *chinensis* Osbeck, Dagbok Ostind. Resa 230. 1751.

Limnophila hirsuta Benth. in DC. Prodr. 10: 388. 1845.

Stemodia hirsuta Heyne in Wall. Cat. No. 3930. 1831 (nomen), Benth. Scroph. Ind. 24. 1835.

The specimens on which *Columnea chinensis* was based were collected September 27, 1751, on Dane's Island, near Whampoa, and like most of Osbeck's species it has been entirely overlooked by all botanists. The introductory statement, in Swedish, is translated as follows: "Pange-ka, so-called by the Chinese, is an herb which is common along the river, growing mostly in the water along with preceding species [*Cyperus*]. It has a pleasant smell." It is with difficulty placed in any of the known genera as proved by the following description: "*Columnea* ? *chinensis*: Perianthium duplex: inferius diphyllum, minimum, foliolis subulatis; superius quinquepartitum, laciniis lineari-lanceolatis, tubo brevioribus. Corolla monopetala: Tubus cylindricus; Faux barbata; Limbus quinquelobus, Lobis ovatis; Lucisura inter 2 lobos unius lateris minus profunda, ad quam pistillum & stamina sese vertunt & barba circumdantur. Filamenta 4 filiformia, didynamiae, 2 & 2 adhaerentia; Antherae incumbentes, parvae.

Germen ovatum. Stylus filiformis. Stigma subcapitatum, deflexum. Capsula ovata, polysperma. Herba caule procumbente, tereti, crasso, carnoso, villosa. Folia opposita, oblonga, serrata. Flores ex alis & terminales, caerulei; pedunculi villosi. Habitat ad ripam fluminis."

Melia parasitica Osbeck, Dagbok Ostind. Resa 278. 1757 = *Lansium domesticum* Jack.

The introductory statement in Swedish, regarding this species, translates as follows: "A small herb of barely a finger's length growing on the tree trunks. It is so rare that, so far as is known, no one ever saw it before." Following this is the description in Latin: "Perianthium monophyllum, tridentatum, cylindricum, corolla dimidio brevius. Corolla monopetala, cylindrica, 5 partita; petalis oblongis. Nectarium campanulatum, margine praemorsum, cujus margini interiori filamenta 10, brevissima vix conspicua, inserta. Antherae subquadratae. Germen cylindricum, pentagonum; stylus subulatus, basi lanatus; stigma capitatum. Flores racemosi. Folia nulla."

The description calls for a plant with a peculiar combination of characters, a small, epiphytic or parasitic, leafless herb with meliaceous flowers. There is no plant in existence presenting the above characters, yet Osbeck's description is susceptible of explanation. He undoubtedly saw the characteristic cauliflorous inflorescence of *Lansium domesticum* Jack, a tree in common cultivation throughout Java, and cauliflory being a phenomenon quite new to him, he explained it by assuming the racemose inflorescence, growing directly from the trunk of the tree, to be a leafless parasitic plant. However, Osbeck's description does not apply entirely to *Lansium* flowers, as he describes the calyx as 3-toothed, the staminal tube as campanulate, and the style as subulate. It is possible that he saw a cauliflorous species of *Dysoxylum*, but all the known Javan cauliflorous species of this genus are described as having 4-merous, not 5-merous flowers. Osbeck's specimens were collected at New Bay, western Java, January 20, 1752.

Monarda chinensis Osbeck, Dagbok Ostind. Resa 240. 1757 = ?

This was from Dane's Island, near Whampoa, China, and was observed by Osbeck October 20, 1751. The original description, introduced by a statement in Swedish to the effect that the species grew on bare hills, is as follows: "*Monarda chinensis*. Perianthium duplex; superius 5 phyllum foliolis linearibus, inferius diphyllum. Corolla

monopetala; tubus cylindricus, calyce longior; Limbus bilabiatus, Labium superius integrum, minimum, inferius trilobum deflexum, longius. Stamina duo. Pistillum unicum. Flores minimi, lutei, ex alis. Caulis fibrosis. Habitat in aridis locis."

If this species be a labiate, then no representative of the entire family at present known from the Province of Kwangtung agrees entirely with Osbeck's description. Possible identifications are *Salvia plebeia* R. Br. and *Mosla lanceolata* Max., but Osbeck's description agrees with neither. The only other genera of *Labiatae* known from Kwangtung that have but two stamens are *Lycopus* and *Salvia*, and assuredly *Monarda chinensis* Osbeck can be referred to neither of these. It is possible that Osbeck's description applies to some representative of the *Acanthaceae* or the *Scrophulariaceae* in genera having flowers with but two stamens, and again it is possible that the description was in part based on erroneous observations. It is certainly no *Monarda*.

Phytolacca ? javanica Osbeck, Dagbok Ostind. Resa 276. 1757 = *Terminalia catappa* L.

Osbeck's description and specific name antedates that of Linnaeus, but fortunately the Linnæan name *Terminalia catappa* is saved by the fact that Miquel has described a different species as *Terminalia javanica*. *Phytolacca ? javanica* was observed near Anjer, Java, January 20, 1752. The associated plants mentioned by him are *Sophora alopecuroides* (probably an erroneous identification for *S. tomentosa*), *Morinda citrifolia*, *Guettarda speciosa*, *Lobelia plumierii* = *Scaevola*, *Crinum asiaticum*, *Corypha umbraculifera*, *Cordia myxa*, *Flagellaria indica*, and *Convolvulus pes-caprae*, a typical Malayan strand association. The full description, introduced by a short statement in Swedish to the effect that it was a large tree standing on the seashore, with smooth leaves and downy branchlets, is as follows: "*Phytolacca ? javanica*. Perianthium nullum. Corolla monopetala, 5 fida; Lobis ovatis, minimis. Filamenta decem filiformia, superne curva, corollae tubo inserta, corolla longiora. Antherae subrotundae. Arbor ramosissima. Petiola & rami tomentosa. Folia lato-lanceolata, petiolata, integerrima, glabra, axillaria, 7 nervia. Flores parvi, racemosi." There are slight discrepancies in the description, as, for example, the leaves described as "lato-lanceolata"; in the normal form of *Terminalia catappa* the leaves are obovate, but are subject to con-

siderable variation. No other Indo-Malayan strand tree at all agrees with Osbeck's description.

Rhamnus thea Osbeck, Dagbok Ostind. Resa 161, 232. 1757 = *Sageretia theezans* (L.) Brongn.

This is listed in Index Kewensis as "*Rhamnus thea* Osb. It. 232 = *Sageretia theezans*." Osbeck's name is cited by Linnaeus as a synonym in the original description of *Rhamnus theezans* L. Mant. 2: 207. 1771. However, while there is no doubt as to the identity of *Rhamnus thea*, and this name is older than *Rhamnus theezans* L., I do not consider that *Rhamnus thea* is properly published by Osbeck, and hence do not accept his specific name. There is no Latin description, and a translation of Osbeck's remarks is as follows: "*Rhamnus thea*, or poor man's tea, is a bush about 6 feet high, the leaves of which resemble those of our common tea, but the flowers belong to the first order of the fifth class [*Pentagynia*, *Monandria*], are quite small, spicate, on the much branched branchlets. It is used by the poor as tea and here served as a fence. It is called by the Chinese *Tja*."

Scirpus chinensis Osbeck, Dagbok Ostind. Resa 220. 1753.

Scirpus squarrosus L. Mant. 1: 181. 1767.

The original description of this species is as follows: "*Scirpus (chinensis)* culmo triquetro, subnudo, spicis ternis, sessilibus, terminalibus, involucro diphylo, reflexo." In Swedish follows a statement to the effect that it is a grass with long narrow leaves, one of those subtending the spike being much longer than the other, and with a reference to *Motta pullu* Rheede, Hort. Malabar. 12: 71. *pl.* 38 as representing the species.

Scirpus chinensis Osbeck is listed in Index Kewensis, the original publication is correctly cited, as to page, but not as to title: "*Scirpus chinensis* Osb. It. 220," and it is reduced to *Scirpus squarrosus* L., to which Linnaeus also referred Rheede's figure. There is practically no doubt as to the correctness of this identification of Osbeck's species, but his name is much older than that of Linnaeus and it is here adopted. Osbeck's specimen was collected September 23, 1751, on "Frans" (= French) Island, near Whampoa. Dunn & Tutchet¹² cite the species from Whampoa.

¹² Fl. Kwangtung and Hongkong 301. 1912.

Solidago chinensis Osbeck, Dagbok Ostind. Resa 241. 1759=?

This was from Dane's Island, near Whampoa, October 20, 1751, and certainly is no *Solidago*. *Solidago virgaurea* L. occurs in Kwangtung Province, but not at low altitudes. The original description, which is entirely inadequate, is as follows: "*Solidago (chinensis)* caule procumbente, ramis alternis, foliis radicalibus linearibus. Obs. vix pedalis." The description is rather definite, and it is possible that the identity of the species may be determined at a later date. The name does not appear in Index Kewensis.

Tetradapa javanorum Osbeck, Dagbok Ostind. Resa 93. 1757=
Erythrina indica Lam.

The original description of this species is as follows: "*Tetradapa Javanorum*. *Erythrina Corallodendron* ? Descr. Perianthium monophyllum, spathaceum, breve, ovatum. Vexillum magnum, includens petala 4 ovalia, breviora. Stamina decem, quorum 9 ad medium connexa. Filamenta subulata. Antherae erectae oblongae. Germen longum, lanatum. Stylus subulatus. Stigma pubescens, nutans. Flores racemosi sive verticillati, rubri, caduci. Fructus, sub arbore jacens (si hujus arboris non dicam) erat legumen rhomboideum compressum. Semina duo reniformia." The description is followed by a statement in Swedish regarding the size of the tree, color of its flowers, etc., and a reference to *Gelala litorea* Rumph. Herb. Amb. 3: 231. t. 77, which is *Erythrina indica* Lam. The specimens were observed by Osbeck near Anjer, Java, July 16, 1751, associated with numerous other typical strand plants.

It is apparent that Osbeck intended "*Tetradapa*" as a new generic name, although it is not so indicated, and both the generic and specific name have been overlooked by all subsequent botanists; *Tetradapa* is no Javanese name. While *Tetradapa javanorum* Osbeck is unquestionably an exact synonym of *Erythrina indica* Lam., it seems to be necessary to adopt, as the oldest specific name for the species, *Erythrina variegata* L. in Stickman Herb. Amb. 10. 1754, Amoen. Acad. 4: 122. 1759, which is based solely on *Gelala alba* Rumph. Herb. Amb. 2: 234. pl. 77. *Gelala alba* Rumph. = *Erythrina variegata* L. is merely a form of the common *Erythrina indica* Lam. with slightly variegated leaves, and presents no characters by which two species may be distinguished. Unless this name be accepted, the rules of priority would necessitate the transfer of *Tetradapa javanorum* to *Erythrina*, for

Erythrina indica Lam. is antedated by both *E. variegata* L. and by Osbeck's name. The synonymy is as follows:

Erythrina variegata L. in Stickman Herb. Amb. 10. 1754; Amoen. Acad. 4: 122. 1759.

Gelala alba Rumph. Herb. Amb. 2: 234. *pl.* 77. 1750.

Erythrina corallodendron var. *orientalis* L. Sp. Pl. 706. 1753.

Tetradapa javanorum Osbeck, Dagbok Ostind. Resa 93. 1757.

Erythrina picta L. Sp. Pl. ed. 2. 993. 1763, saltem quoad

Gelala alba Rumph.

Erythrina indica Lam. Encycl. 2: 391. 1785.

Erythrina orientalis Murr. Comm. Gotting. 8: 35. *pl.* 1. 1787.

Erythrina lithosperma Blume, Cat. Gew. Buitenz. 92. 1823.

Erythrina carnea Blanco, Fl. Filip. 564. 1837.

The form with slightly variegated leaves, well figured by Rumphius, is *Erythrina variegata* L.; the form with the leaves not variegated is *Erythrina indica* Lam. *Erythrina variegata* is cultivated in Amboina (Rumphius), in Mindanao (Merrill), in Palawan (Curran), and doubtless in various other islands in the Malay Archipelago and the Philippines, and is typical *Erythrina indica* Lam. in all respects except in the slight variegation of its leaves. A parallel case is presented by the two prominent forms of *Graptophyllum pictum* (L.) Griff., as to leaf color, but which no botanist now considers represent other than a single species.

Torenia glabra Osbeck, Dagbok Ostind. Resa 210. 1757.

Torenia benthamiana Hance, Ann. Sci. Nat. IV. Bot. 18: 226. 1862.

Osbeck's name is much the older and should be retained for this species; it does not appear in Index Kewensis. The original description is as follows: "*Torenia glabra*. Descr. Perianthium 5 angulare, erectum, laciniis 5 lineari-lanceolatis, tubo brevioribus. Corolla ringens; Labium superius subintegrum, reflexum; Labium inferius trilobum, deflexum. Stamina 4, corolla breviora, quorum 2 tubo breviora, per paria connexa, labio inferiori imposita; superiora altero ramo sterili. Stylus filiformis; stigma cochleatum, bifidum. Capsula longa, unilocularis? Semina plurima. Flores ex alis. Folia ovata, crenata, subsessilia, opposita. Habitat etjam inter agros Oryzae insulae Danicae."

The specimens on which the description was based were from

Dane's Island, near Whampoa, September 10, 1751. *Torenia benthamiana* Hance, which is certainly a synonym of *T. glabra* Osbeck, is reported by Dunn & Tutchet¹³ from Hongkong, Swatow, and Whampoa.

Trapa bicornis Osbeck, Dagbok Ostind. Resa 191. 1757.

This appears as a footnote under the Chinese name *ling-kamm* or *leng-ka*, as "*Trapa bicornis* vid. Plum. Icon. T. 67," with a statement in Swedish to the effect that the fruit looks like two horns joined together, with a kernel in the middle, that it is sold in the shops, and that it is eaten by poor people. Osbeck's name antedates that of the younger Linnaeus who is generally cited as the authority for the species.¹⁴ *Trapa bicornis* is, by many authors, considered only a form of *Trapa natans* L.

Urena chinensis Osbeck, Dagbok Ostind. Resa 225. 1757 = ? *Urena lobata* L.

This is listed in Index Kewensis as follows: "*Urena chinensis* Osbeck, Voy. ed. Angl. 1, 363 (Quid?)," the English edition of Osbeck's work having been published in the year 1771. The description is inadequate, but the plant is probably merely a form of *Urena lobata* L. The original description is as follows: "*Urena (chinensis)* caule erecto, floribus majoribus," followed by a statement in Swedish to the effect that it grew on the lower slopes of hills not far from the shore. It was observed near Whampoa, September 22, 1751.

ADDITIONS TO INDEX KEWENSIS

Achyranthes chinensis Osbeck, Dagbok Ostind. Resa 205. 1757 = ? *Achyranthes indica* L.

Briza elegans Osbeck, Dagbok Ostind. Resa 246. 1757 = ? *Eragrostis elegantula* Steud.

Caryota javanica Osbeck, Dagbok Ostind. Resa 270. 1757 = *Ceratolobus javanicus* Merr. (*C. glaucescens* Blume).

Catesbaea ? javanica Osbeck, Dagbok Ostind. Resa 92. 1757 = *Clerodendron commersonii* Spreng.

Citrus grandis Osbeck, Dagbok Ostind. Resa 98. 1757 (*C. decumana* L.).

Citrus limonia Osbeck, Reise Ostind. China 250. 1765.

Citrus sinensis Osbeck, Dagbok Ostind. Resa 41. 1757, *nomen*, Reise Ostind. China 250. 1765.

¹³ Fl. Kwangtung and Hongkong 188. 1912.

¹⁴ L. f. Suppl. 128. 1781.

- Columnnea chinensis** Osbeck, Dagbok Ostind. Resa 230. 1757 = *Limnophila chinensis* Merr. (*L. hirsuta* Benth.).
- Commelina chinensis** Osbeck, Dagbok Ostind. Resa 242. 1757 = *C. nudiflora* L.
- Cryptanthus chinensis** Osbeck, Dagbok Ostind. Resa 215. 1757 = ?
- Melia parasitica** Osbeck, Dagbok Ostind. Resa 277. 1757 = *Lansium* vel *Dysoxylum*.
- Mimosa chinensis** Osbeck, Dagbok Ostind. Resa 233. 1757 = *Albizzia chinensis* Merr. (*A. stipulata* Boiv.).
- Monarda chinensis** Osbeck, Dagbok Ostind. Resa 240. 1757 = ?
- Phytolacca** ? **javanica** Osbeck, Dagbok Ostind. Resa 276. 1757 = *Terminalia catappa* L.
- Solidago chinensis** Osbeck, Dagbok Ostind. Resa 241. 1757 = ?
- Tetradapa javanorum** Osbeck, Dagbok Ostind. Resa 93. 1757 = *Erythrina indica* Lam. = *E. variegata* L.
- Torenia glabra** Osbeck, Dagbok Ostind. Resa 210. 1757 (*T. benhamiana* Hance.)

CORRECTIONS TO INDEX KEWENSIS

- Clematis chinensis** Osbeck, Dagbok Ostind. Resa 205, 242. 1757, in place of "Osbeck. iter. ed. Angl. 1: 393" [1771].
- Hedyotis herbacea** Osbeck, Dagbok Ostind. Resa 245. 1757, in place of "Osbeck Voy. ed. Angl. 4" [1771] = *Oldenlandia corymbosa* L.
- Hedysarum styracifolium** Osbeck, Dagbok Ostind. Resa 247. 1757, in place of "*Hedysarum styracifolium* L. Syst. ed. 10. 1169 [1759] = *Desmodium styracifolium* Merr.
- Holcus latifolius** Osbeck, Dagbok Ostind. Resa 247. 1757, in place of "*Holcus latifolius* L. Syst. ed. 10. 1305" [1759] = *Centotheca latifolia* (Osbeck) Trin.
- Hypericum chinense** Osbeck, Dagbok Ostind. Resa 244. 1757, in place of "*Hypericum chinense* L. Syst. ed. 10, 2, 1184" [1759].
- Scirpus chinensis** Osbeck, Dagbok Ostind. Resa 220. 1757, in place of "Osbeck. Iter 220" (*S. squarrosus* L.).
- Trapa bicornis** Osbeck, Dagbok Ostind. Resa 191. 1757, in place of "*Trapa bicornis* L. Suppl. 128" [1781].
- Urena chinensis** Osbeck, Dagbok Ostind. Resa 225. 1757, in place of "Osbeck, Voy. ed. Angl. 1, 363" [1771].